2021 & 2022

GW Cancer Center Cancer Survivorship E-Learning Series Annual Report

GW Cancer Center

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CANCER CONTROL TAP
Tap into resources to control cancer

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INTRODUCTION

The GW Cancer Center Cancer Survivorship E-Learning Series is a self-paced online training available to healthcare professionals at no cost. The training provides Comprehensive Cancer Control (CCC) programs and coalitions with a tool to inform health care professionals of the unique needs of cancer survivors. This report summarizes demographic and geographic data from participants that took the training from January 1, 2021 to October 18, 2022. Information provided in this report and previous reports can assist CCC programs and coalitions, as well as health care professional associations, with setting goals and monitoring progress as it relates to improving cancer survivorship care. Current training modules include:

Module 1: Overview of key components of cancer survivorship care, national efforts to address the needs of cancer survivors, health disparities in care, and health status among cancer survivors.

Module 2: Overview of common long-term and late effects of cancer and its treatment.

Module 3: In-depth look at the psychosocial impact of cancer and recommendations on how to support the psychosocial needs of cancer survivors.

Module 4: Prevention and wellness in cancer survivorship care and role of the primary care providers in supporting cancer survivors to make lifestyle changes.

Module 5: Survivorship care coordination, the use of survivorship care plans as a communication tool, and the role of oncologists and primary care providers in post-treatment care.

Module 5 Companion: A framework and tools to help clinicians and health care organizations measure patient-reported priorities to inform quality cancer survivorship care.

Module 6: The role of rehabilitation in post-treatment care and the importance of spirituality and interventions to support cancer survivors.

Content for this series evolves with emerging evidence: In 2022, two new modules were released focused on fertility preservation in patients with cancer and prevention/ management of chemotherapy-induced peripheral neuropathy in survivors of adult cancers based on American Society of Clinical Oncology (ASCO) guidelines.

METHODS

Data were collected from learners who completed at least one GW Cancer Center Cancer Survivorship E-Learning Series module from January 1, 2021 to October 18, 2022. Users who enrolled in the training but did not complete it by October 18, 2022 were excluded from the analysis. Statistical analyses were conducted using IBM SPSS Statistics software (Version 28). Data were stratified based on learners' occupations, such as primary care providers (PCP) (e.g., gynecology, family medicine, internal medicine, etc.), specialty providers (e.g., oncology, surgery, etc.), and other professions (health educators, volunteers, etc.). Data were also stratified by geographical location (state, tribe or territory). Please note that international level data were not included in the data analysis.

If your state, tribe, or territory is not included in this report, or if you have questions, please contact the GW Cancer Center (cancercontrol@gwu.edu).

RESULTS

Learner Demographics

Age distribution among all learners remained similar in both years. In both 2021 and 2022, training completion varied by racial groups across the three different occupation categories. Most of the learners identified as White in both years and across disciplines. Across all three categories, most learners were cisgender females. The majority of individuals who completed at least one GW Cancer Center Cancer Survivorship E-Learning Series module were straight. In both years, PCP learners mainly served urban communities; however, specialty providers were more widely distributed across different types of communities. Given the relatively stable learner demographics between reports, CCC programs and coalitions, along with heath care professional organizations, should promote this training to more diverse audiences, particularly among non-White, sexual and gender minorities, and rural-residing health care professionals. It is important to increase capacity among diverse health care professionals to ensure the diverse individuals they serve have access to quality cancer survivorship care.

Figures 2 and 3 illustrate the geographic location of unique learners who completed at least one module in 2021 compared to 2022. In 2021, 152 unique learners completed at least one module and 151 did so in 2022. In 2021, most learners were located in the states of California, Kansas, Michigan, Texas and New York. California and Kansas were also highly represented in 2022, in addition to Florida, Nebraska, North Carolina and New York. The more widespread distribution of learners in 2022 indicates the capacity to offer quality care for cancer survivors is increasing geographically.

Table 1. Learner Demographics Stratified by Occupation, 2021 and 2022*

	2021			2022		
Age	**PCP (n=33)**	**Specialty (n=46)**	**Other (n=21)**	**PCP (n=44)**	**Specialty (n=75)**	**Other (n=22)**
18-29	11 (33.3%)	5 (10.9%)	5 (23.8%)	10 (22.7%)	13 (17.3%)	8 (36.4%)
30-39	11 (33.3%)	21 (45.7%)	7 (33.3%)	15 (34.1%)	27 (36.0%)	4 (18.2%)
40-49	6 (18.2%)	8 (17.4%)	4 (19.0%)	10 (22.7%)	16 (21.3%)	5 (22.7%)
50-59	3 (9.1%)	7 (15.2%)	4 (19.0%)	6 (13.6%)	15 (20.0%)	1 (4.5%)
60 or older	2 (6.1%)	4 (8.7%)	1 (4.8%)	2 (4.5%)	3 (4.0%)	3 (13.6%)
Prefer not to answer	0 (0.0%)	1 (2.2%)	0 (0.0%)	1 (2.3%)	1 (1.3%)	1 (4.5%)
Race	**PCP (n=33)**	**Specialty (n=48)**	**Other (n=24)**	**PCP (n=37)**	**Specialty (n=79)**	**Other (n=17)**
American Indian	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.7%)	3 (3.8%)	0 (0.0%)
Asian	5 (15.2%)	7 (14.6%)	3 (12.5%)	5 (13.5%)	6 (7.6%)	1 (5.9%)
Black	2 (6.1%)	2 (4.2%)	5 (20.8%)	4 (10.8%)	7 (8.9%)	5 (29.4%)
Native Hawaiian	0 (0.0%)	2 (4.2%)	0 (0.0%)	0 (0.0%)	1 (1.3%)	0 (0.0%)
White	24 (72.7%)	35 (72.9%)	12 (50.0%)	25 (67.6%)	58 (73.4%)	11 (64.7%)
Prefer not to answer	2 (6.1%)	2 (4.2%)	4 (16.7%)	2 (5.4%)	4 (5.1%)	0 (0.0%)
Gender Identity	**PCP (n=33)**	**Specialty (n=46)**	**Other (n=21)**	**PCP (n=38)**	**Specialty (n=77)**	**Other (n=17)**
Cisgender Female	26 (78.8%)	43 (93.5%)	16 (76.2%)	31 (81.6%)	67 (94.4%)	16 (94.1%)
Cisgender Male	7 (21.2%)	1 (2.2%)	4 (19.0%)	7 (18.4%)	4 (5.6%)	1 (5.9%)
I prefer not to answer	0 (0.0%)	2 (4.3%)	1 (4.8%)	0 (0.0%)	6 (8.5%)	0 (0.0%)
Sexual Orientation	**PCP (n=33)**	**Specialty (n=46)**	**Other (n=21)**	**PCP (n=38)**	**Specialty (n=77)**	**Other (n=18)**
Straight	29 (87.9%)	35 (76.1%)	16 (76.2%)	32 (84.2%)	63 (81.8%)	15 (83.3%)
Gay or lesbian	2 (6.1%)	3 (6.5%)	2 (9.5%)	2 (5.3%)	1 (1.3%)	0 (0.0%)
Bisexual	0 (0.0%)	3 (6.5%)	1 (4.8%)	0 (0.0%)	1 (1.3%)	1 (5.6%)
I prefer not to answer	2 (6.1%)	5 (10.9%)	2 (9.5%)	4 (10.5%)	12 (15.6%)	2 (11.1%)
Communities Served	**PCP (n=33)**	**Specialty (n=46)**	**Other (n=21)**	**PCP (n=38)**	**Specialty (n=80)**	**Other (n=18)**
Rural	5 (15.6%)	7 (16.7%)	4 (26.7%)	11 (29.7%)	16 (21.9%)	3 (17.6%)
Suburban	8 (25.0%)	17 (40.5%)	4 (26.7%)	3 (8.1%)	18 (24.7%)	6 (35.3%)
Urban	19 (59.4%)	17 (40.5%)	7 (46.7%)	23 (62.2%)	38 (52.1%)	7 (41.2%)
Urban and Rural	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (5.9%)
Urban and Suburban	0 (0.0%)	1 (2.4%)	0 (0.0%)	0 (0.0%)	1 (1.4%)	0 (0.0%)
All	1 (3.0%)	3 (6.5%)	5 (23.8%)	0 (0.0%)	7 (9.3%)	0 (0.0%)
None	0 (0.0%)	1 (2.2%)	1 (4.8%)	1 (2.6%)	0 (0.0%)	1 (5.6%)

*The data may differ when demographics are stratified across the three profession categories because it is based on whether learners provided answers for each of the categories.

Figure 1. Module Completion by Occupation, 2021 & 2022

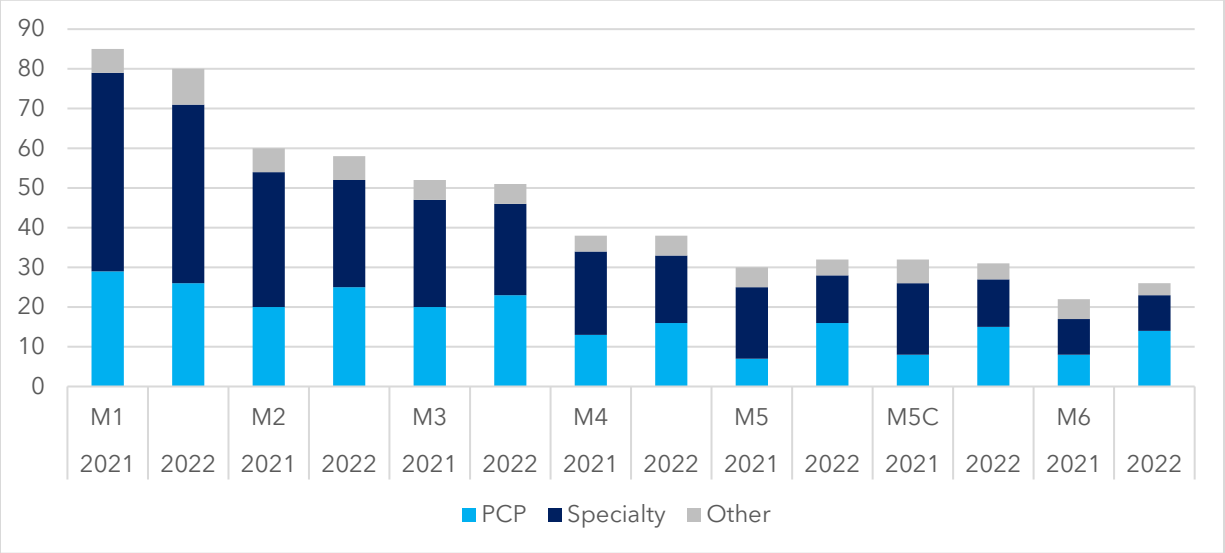

Figure 2. Unique Learners by Location, 2021

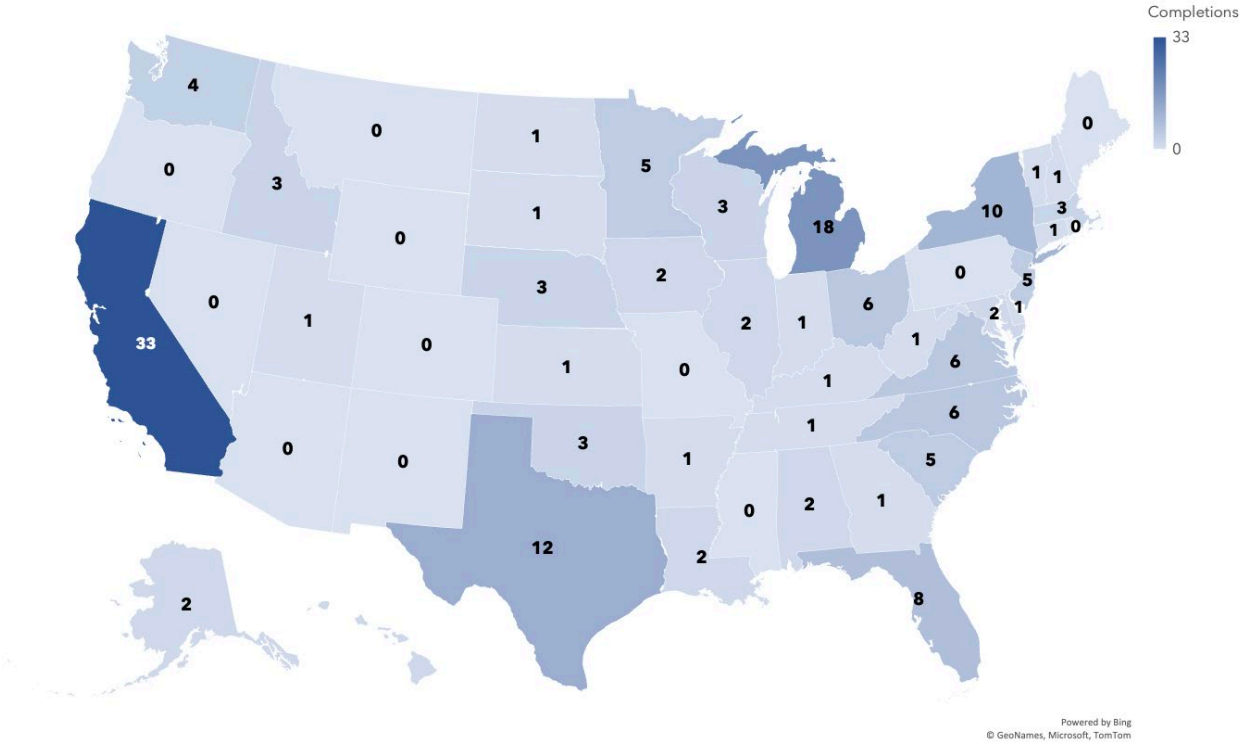

Figure 3. Unique Learners by Location, 2022

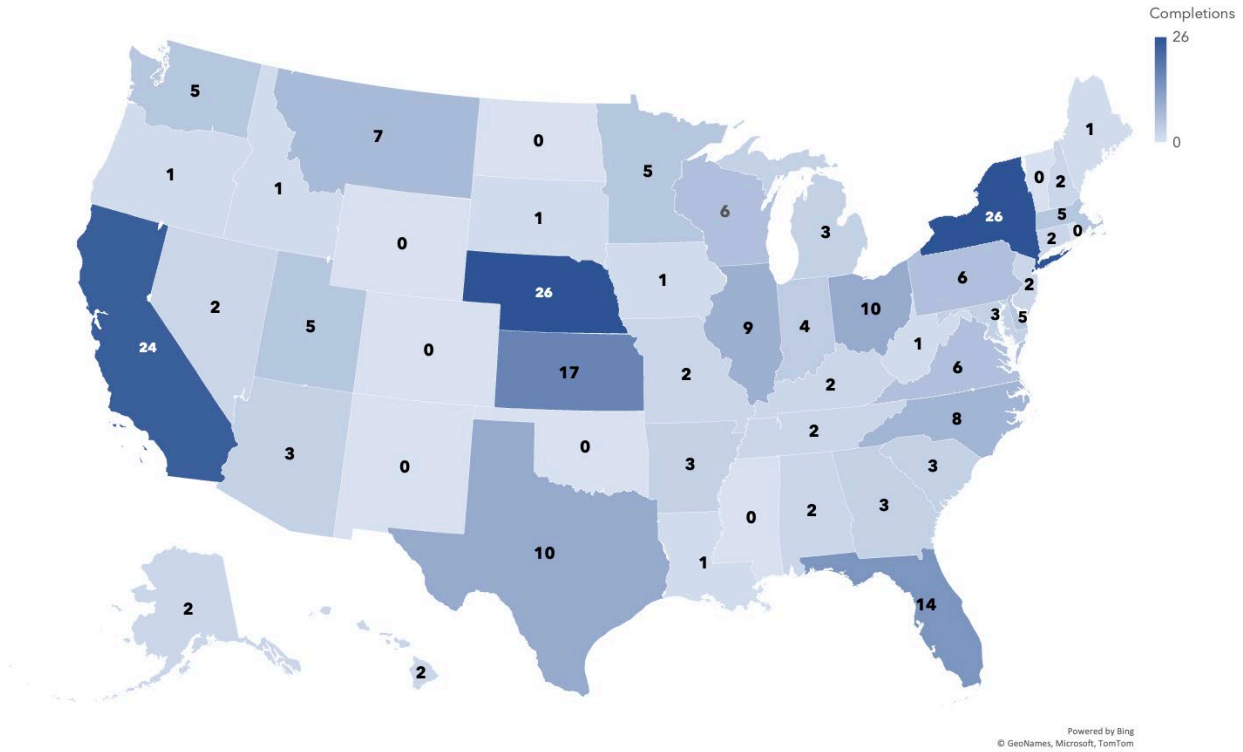

Table 2. 2021 Location of Learners by Primary Care (PCP), Specialty Provider (SP), or Other Professions (Modules 1 – 6)

	Module 1			Module 2			Module 3			Module 4			Module 5			Module 5C			Module 6		
State	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**
Alaska	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Alabama	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California	10	3	0	6	1	0	8	1	0	4	0	0	3	0	0	4	0	0	4	0	0
Florida	0	2	0	0	2	0	0	2	0	0	1	0	0	2	0	0	2	0	0	1	0
Georgia	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas	3	6	0	3	6	0	3	5	0	3	5	0	0	0	0	0	0	0	0	0	0
Louisiana	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0
Maryland	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michigan	1	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minnesota	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Missouri	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
North Carolina	0	2	0	0	2	0	0	2	0	0	2	0	0	2	0	0	2	0	0	1	0
Nebraska	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey	1	0	2	1	0	2	0	0	2	0	0	2	1	0	2	0	0	2	1	0	2
New York	2	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0
Oklahoma	0	1	2	0	0	2	0	0	2	0	0	1	0	0	2	0	0	2	0	0	1
Pennsylvania	0	1	0	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
South Dakota	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tennessee	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texas	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Virginia	0	4	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
Washington	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wisconsin	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**22**	**34**	**5**	**15**	**21**	**5**	**13**	**15**	**4**	**7**	**13**	**3**	**5**	**10**	**4**	**5**	**9**	**4**	**6**	**4**	**3**

Table 3. 2022 Location of Learners by Primary Care (PCP), Specialty Provider (SP), or Other Professions (Modules 1 – 6)[1]

	Module 1			Module 2			Module 3			Module 4			Module 5			Module 5C			Module 6		
State	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**	**PCP**	**SP**	**Other**
Arizona	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Arkansas	0	1	1	0	1	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
California	1	4	1	1	1	1	1	1	1	1	0	1	1	0	1	1	0	1	1	0	0
Delaware	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Florida	5	4	0	3	2	0	3	1	0	3	1	0	3	1	0	3	1	0	3	1	0
Georgia	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0
Iowa	0	1	0	1	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Kansas	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Maine	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
Massachusetts	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michigan	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Minnesota	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Montana	0	2	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebraska	1	10	0	1	4	0	1	4	0	1	3	0	1	3	0	1	3	0	1	1	0
New York	4	2	0	4	2	0	2	2	0	2	2	0	2	0	0	2	0	0	2	0	0
North Carolina	2	1	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Pennsylvania	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Total	**14**	**34**	**6**	**13**	**21**	**5**	**11**	**17**	**4**	**9**	**13**	**4**	**8**	**9**	**3**	**7**	**8**	**3**	**7**	**6**	**2**

[1] 2022 tables only include data from January 1, 2022 – October 18, 2022

Change in Learner Self-Reported Confidence

Learners were asked to complete a pre- and post module assessment survey. Each evaluation question was answered on a 5-point Likert scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree. Paired sample t-tests were used to assess changes in self-reported confidence in learning objectives by module. In 2021 and 2022, learners reported a statistically significant increase in mean pre- and post-training confidence in learning objectives. Tables 4 and 5 present the results of paired t-tests indicating that all learners showed statistically significant self-reported increases to learner confidence (p <0.05).

Table 4. 2021 Pre- and Post-Assessment Means and Change in Learners Self-Confidence Ratings

Module	Number of Learners	Pre-Assessment Mean (SD)	Post-Assessment Mean (SD)	Percent Change	T-Test	P-Value
1	155	2.98 (0.92)	4.12 (0.63)	14.3%	15.12	**<0.001**
2	113	2.91 (0.78)	4.07 (0.59)	48.1%	15.63	**<0.001**
3	93	2.91 (0.83)	4.11 (0.55)	41.2%	13.10	**<0.001**
4	71	3.25 (0.90)	4.24 (0.53)	30.5%	9.05	**<0.001**
5	45	3.39 (0.92)	4.22 (0.59)	24.5%	7.33	**<0.001**
5C**	45	3.42 (0.84)	4.07 (0.78)	19.0%	5.59	**<0.001**
6	35	3.26 (0.72)	4.15 (0.63)	27.3%	7.84	**<0.001**

*Statistical significance was set to p<.05. Bold indicates statistical significance.
** Module 5 Companion: Advancing Patient-Centered Cancer Survivorship Care

Table 5. 2022 Pre- and Post-Assessment Means and Change in Learners Self-Confidence Ratings

Module	Number of Learners	Pre-Assessment Mean (SD)	Post-Assessment Mean (SD)	Percent Change	T-Test	P-Value
1	158	3.20 (0.86)	4.23 (1.30)	32.2%	16.02	**<0.001**
2	111	3.07 (0.85)	4.12 (0.65)	34.2%	11.79	**<0.001**
3	98	3.14 (0.85)	4.19 (0.70)	33.4%	10.96	**<0.001**
4	77	3.19 (0.88)	4.20 (0.63)	31.7%	10.14	**<0.001**
5	54	3.26 (0.93)	4.27 (0.55)	31.0%	7.91	**<0.001**
5C**	51	3.33 (0.84)	4.16 (0.54)	24.9%	6.62	**<0.001**
6	45	3.29 (0.88)	4.23 (0.70)	28.6%	5.75	**<0.001**

*Statistical significance was set to p<.05. Bold indicates statistical significance.
** Module 5 Companion: Advancing Patient-Centered Cancer Survivorship Care

Learner Satisfaction

During the reporting period, over 90% of learners were satisfied with the training and 87% of learners indicated that they would recommend the training to someone else. The majority of the participants (93%) noted that their knowledge had increased after completing the training and 90% indicated that they were motivated to instill changes at their workplace as a result of the training.

DISCUSSION

Completion rates remain higher among specialty providers than PCPs for the GW Cancer Center Cancer Survivorship E-Learning Series. Learners report satisfication with the training and increases in confidence from pre- to post-assessments. Note that 2022 data only includes 10 months, so additional enrollment and training completions will be reported in the 2023 report. 2023 efforts to increase enrollment and completion include development and implementation of a marketing campaign to promote trainings and incorporation of applied case examples responsive to feedback from learners.

RESOURCES

CCC programs and coalitions can increase capacity of cancer survivorship care in their region by disseminating information about the GW Cancer Center Cancer Survivorship E-Learning Series:

- GW Cancer Center Online Academy Marketing and Dissemination for Online Courses: Contains strategies to plan and implement marketing efforts to increase the awareness and use of the GW Cancer Center Online Academy's educational resources
- GW Cancer Center Cancer Survivorship E-Learning Series Promotional Video: A short promotional video about the Cancer Survivorship E-Learning Series sharable via e-newsletters, website, social media, or at local professional meetings/ conferences

Additional resources to build capacity in cancer survivorship amonghealthcare providers to cancer control professionals:

- Advancing Patient-Centered Cancer Survivorship Care Toolkit: An adaptable set of tools, including needs assessment, workshop and evaluation tools and resource list, to help providers improve patient-centered cancer survivorship care in their state, tribe, or territory
- American Society of Clinical Oncology (ASCO) Survivorship Care Planning Tools: Sample templates and resources for survivors' long-term care needs
- CDC Survivorship Care Plans: A basic overview of what a survivorship care plan is and why it is important
- CDC Health Equity in Cancer: An overview of cancer health disparities and equity in cancer prevention and control, among other resources
- National Cancer Survivorship Resource Center: Information on treatment and follow-up care for survivors and providers
- National Cancer Survivorship Resource Center Toolkit: Tools and resources to implement the ACS cancer survivorship care guidelines for colorectal, head and neck, and prostate cancers and the ACS/ ASCO cancer survivorship care guideline for breast cancer

APPENDIX A: LEARNING OBJECTIVES OF GW CANCER CENTER CANCER SURVIVORSHIP E-LEARNING SERIES MODULES

Module	Learning Objectives
1. Current Status of Survivorship Care and the Role of Primary Care Providers	• I am confident in my knowledge of models of cancer survivorship follow-up care • I am confident in my ability to describe national efforts related to survivorship care • I am confident in my understanding of a PCP's role in providing care to cancer survivors
2. Late Effects of Cancer and its Treatments: Managing Comorbidities and Coordinating with Specialty Providers	• I am confident in my ability to describe how cancer treatment late effects may interact with other non-cancer comorbidities • I am confident in my ability to describe common late effects after treatment with chemotherapy, radiation therapy, hormone therapy, and surgery • I am confident in my ability to implement a coordinated plan of care/ consult with specialty providers to manage late medical effects of cancer when appropriate
3. Late Effects of Cancer and its Treatments: Meeting the Psychosocial Health Care Needs of Survivors	• I am confident in my ability to identify types of psychosocial issues and how they vary based on time since treatment completion • I am confident in my ability to describe risk factors for psychosocial consequences of cancer and its treatment • I am confident in my ability to describe how to screen for distress and the PCP's role in follow-up psychosocial care • I am confident in my ability to provide appropriate psychosocial care to post-treatment cancer survivors
4. The Importance of Prevention in Cancer Survivorship: Empowering Survivors to Live Well	• I am confident in my ability to explain the PCP role in providing survivorship care focused on prevention, wellness, and evidence- based guidelines for screening • I am confident in my ability to provide guideline-supported recommendations for secondary prevention to cancer survivors regarding sunscreen, diet, obesity, exercise, alcohol, and tobacco • I am confident in my ability to explain the importance of prevention and wellness in cancer survivorship care
5. A Team Approach: Survivorship Care Coordination	• I am confident in my ability to explain the importance of the survivorship care plan as a communication tool to coordinate care between the oncologist and primary care provider • I am confident in my ability to describe the role of the primary care provider in providing follow-up care to cancer survivors in the primary care setting • I am confident in my ability to describe the coordination of care between oncologists and primary care providers in transitioning a patient from oncology to primary care • I am confident in my ability to describe the roles of oncologists and primary care providers in the shared-care model
5C. Advancing Patient-Centered Survivorship Care	• I am confident in my ability to describe patient-reported priorities for cancer survivorship care

Module	Learning Objectives
6. Cancer Recovery and Rehabilitation	• I am confident in my ability to understand the role and importance of rehabilitation post-treatment • I am confident in my ability to understand the role and importance of spirituality during recovery post-treatment • I am confident in my ability to identify interventions to assist in physical, emotional, and spiritual recovery of cancer survivors
NEW ASCO Guidelines on Survivorship Care • Fertility • Neuropathy	• Describe the impact of cancer and cancer treatment on fertility • Identify methods of fertility preservation in different populations diagnosed with cancer • Describe the role of the health care provider in fertility preservation for patients with cancer • Identify chemotherapy agents associated with neuropathy in adult patients with cancer and associated symptoms • Describe strategies to prevent chemotherapy-induced peripheral neuropathy • Describe strategies to treat chemotherapy-induced peripheral neuropathy that develops during or after neurotoxic chemotherapy